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THE RELATION OF CERTAIN ADENOCARCINOMATA TO ATROPHIC SCIRRHUS OF THE BREAST.

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Under this topic the following questions arise:

1. Is there a distinctive tumor of the breast properly described by the name atrophic or atrophying scirrhus?

2. Is operative procedure for relief of such tumors to be advised against, because experience has shown that such an operation quite uniformly fails to prevent recurrence and thus shortens life, as recurrences are much more malignant than the original growth?

3. Can these tumors be morphologically distinguished from other malignant tumors of the breast, and do their microscopic characteristics explain their slighter malignancy?

It seems probable that all three of these queries can be answered in the affirmative, although this may be disputed by some authorities except as to the first.

I think that most surgeons will admit that they have observed certain cancers of the breast, occurring mainly in patients over sixty years of age, which merit the title of atrophying scirrhus by their clinical course. They resemble other forms of breast cancer in their early manifestations, but proceed slowly until the skin is involved, after which they seem to cease to grow and the ulcer shrinks and becomes hard and highly colored, giving origin to the lay name of "rose cancer." In this condition, either as an ulcer with slight discharge or as a dry, scaling depression, this form of cancer may persist for many years with little annoyance to the patient and practically no interference with her general health.

Most of the older authors recognize this form of growth, and mention its comparative benignancy and the long periods which may elapse without other than local symptoms. The later authors, however, are inclined to ignore it, perhaps because modern surgical methods have tended to the removal of all breast tumors before reaching the stage at which the atrophic tendency would manifest itself.

Butlin, in the *International Cyclopœdia of Surgery*, 1884, figures the atrophic scirrhus and advises against its removal, "for it sometimes appears as if a disease which was previously quiescent and likely to remain almost unchanged during years is started into fresh activity and power which would never have been looked for in the primary disease."

Gross says: "In atrophying scirrhus the epithelial elements undergo fatty degeneration whereby they are partly converted into a granular emulsion which is absorbed, while the contracting stroma renders the alveoli smaller and narrower until in advanced stages they are merely fusiform clefts which contain fatty detritus or one or more rows of unchanged cells."

This same description is copied by Parks, Wharton and Curtis, *American Text-book* and *International Text-book of Surgery*, but none of these lay any stress on the chronic clinical course as a contraindication to operation. Dennis, in his *System*, gives a good description, but fails to give any indication as to operation. Tillman entirely fails to mention it.

Shields' *Diseases of the Breast*, 1898, is the only recent book which gives this subject any attention, and his description is by far the best. His statement is as follows:

"Atrophic degeneration of scirrhus is very important from a clinical point of view. It appears to be caused by diminution of vascular supply, and hence is commonly found in spare and thin persons, in the aged and weak, and in those whose circulation is feeble. This is not universally the case, however, and the cause of this important degeneration is not quite clear. Microscopically, the growth closely simulates fibrous tissue, and with some difficulty collections of atrophic cells and débris are here and there found by the observer, which mark the true nature of the affection. It would be difficult enough, however, for any pathologist apart from clinical assistance to distinguish a section of old atrophic cancer from scar-tissue."

Again, pages 333 and 334:

"All writers notice instances of atrophic or withering cancer. It is usually seen in old and spare persons, and its puckered, cicatricial condition is beautifully shown in the plate. Sometimes slight ulceration is observed, and part of it is often covered by a scab. The glands are very seldom affected. These patients often do not seek advice until the disease has existed for many years, and consequently the surgeon must be especially cautious that internal metastases do not already exist. These are the cases of cancer upon which charlatans found their reputations, and in which I am bound to state members of the profession so often give erroneous opinions.

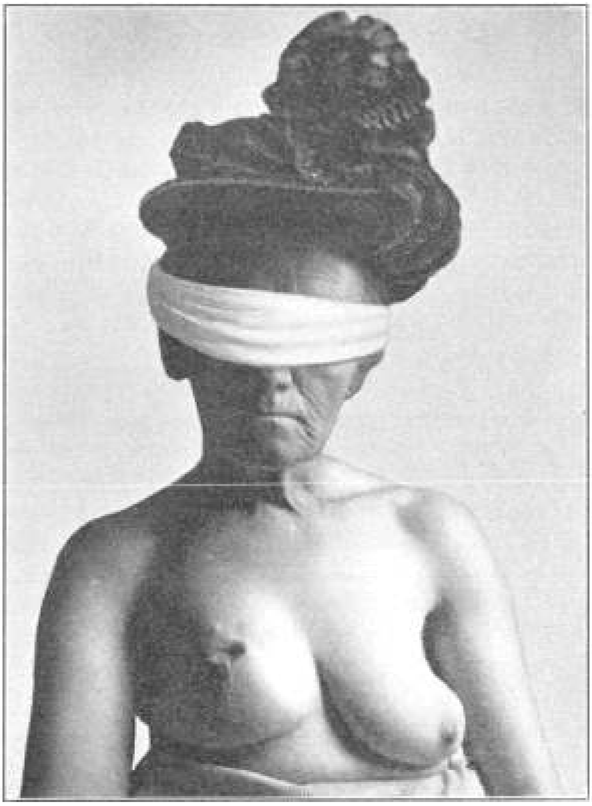
"Bryant in his work relates an excellent and striking series of atrophic cancers, where the patients survived seventeen, fifteen, twenty, nine, and eight years. In one secondary deposits of the skin disappeared and 'fell off' from the fibrous contraction of the tumor. Such experience is not singular. Gross devotes a considerable portion of his book on tumors of the mamma to this interesting class of cancer. He points out that though patients may live with atrophic scirrhus for a quarter of a century, yet visceral deposits are very frequent, and it ultimately invariably destroys life. The skin and fascia of the chest usually ultimately become extensively implicated, and so in the end are the axillary glands. He gives the average age of the affection at forty-seven years. The average period of life in eight cases was no less than fourteen years and nine months. Personally, the cases I have observed of this affection have been principally in old women of seventy years of age and upwards, and notwithstanding the experience of Gross I am inclined to look upon it generally as the cancer of old age, though notable exceptions may be quoted to this rule. In my own experience the axillary glands have not been affected, though the disease had been present in the breast for years, and this is a very remarkable point in a very curious malady."

The photograph gives a typical atrophic scirrhus.

The quotation from Butlin expresses quite accurately the opinion of the older writers as to the propriety of operations upon atrophic scirrhus, but the recent text-books and writers on surgery seem to be almost unanimous in ignoring any special indication in these cases.

One of the best known workers in this branch of surgical pathology, who is in touch with the work done at a large clinic where special attention is paid to breast surgery, said that he recognized no such tumor nor any indication against operation upon any form of breast carcinoma.

FIG. 1.



Atrophic scirrhus of six years' duration. The patient was an old-maid, aged sixty years. The nodule above the dry depression was due to a needle puncture through the edge of the tumor in the early stage of an injection treatment, which was then discontinued. The patient died one year later of acute disease without progress in the tumor.

In contrast to this is Shields' advice in the work quoted, page 386: "Though it is now customary to remove well-marked atrophic carcinoma, I doubt that, especially in elderly women, this course is at all advisable. The records of these remarkable cases make it clear that they may live so long in comfort without surgical interference, that my personal feeling is strongly in favor of adhering to the ancient principles of surgery and leaving them entirely alone, especially if the patient be over sixty years of age. We have yet no evidence that the removal of atrophic carcinoma will prevent subsequent visceral or osseous deposits."

The singularly favorable results attained by Halsted and others in breast surgery have created an optimistic spirit in many quarters which has overruled the teachings of experience in these cases of atrophic scirrhus.

Many surgeons have certainly had the misfortune to observe prompt transformation of a sluggish, quiescent disease by operation and prompt recurrence into the most malignant form of cancer. It seems probable that the results of operation as to recurrence in this class of cases are distinctly worse than in cases of ordinary carcinoma of the breast, and also that the recurring tumor, in this as well as other types of cancer, is vastly more malignant than the primary growth. Microscopically, it is the rule that recurrences are of more malignant type than the primary growths, a characteristic feature being a scanty, ill-formed stroma, forming very small alveoli with few cells in each alveolus.

In answering the third question, it must be noted that all authors seem to have copied an old description which assumes a fatty degeneration of the cells, with contraction of the stroma as the essence of the atrophic scirrhus. These changes undoubtedly do take place in many cases of scirrhus of the breast, in some part of the tumor, but such changes are not incompatible with great malignancy.

I have been unable to secure any sections of atrophic scirrhus which substantiated the statement that the above description applied to this growth, but I here submit drawings of sections from three tumors which belong to this class, which all show adenomatous features, which demonstrate that in these few cases at least the relative clinical benignancy was inherent and dependent on morphological peculiarities and not upon degenerative changes.

These sections will further demonstrate why these growths might easily be diagnosed scirrhus, and would invariably be so if the old dictum of cutting sections for diagnosis from the advancing edge of the tumor were followed.

The study of a large number of sections of various varieties of breast carcinoma has given me the impression that in nearly every case the advancing edge presents the scirrhus picture in some fields, and this may be true even of infiltrating sarcomata; and that in order to make a correct diagnosis the older and central portions of the tumor must be studied.

The drawings[1] submitted are from sections of three atrophic cancers, two of the breast proper and one of the submammary fold, which are all true adenocarcinomata, all exceedingly chronic in their clinical course, all presenting an advancing edge which simulated true scirrhus.

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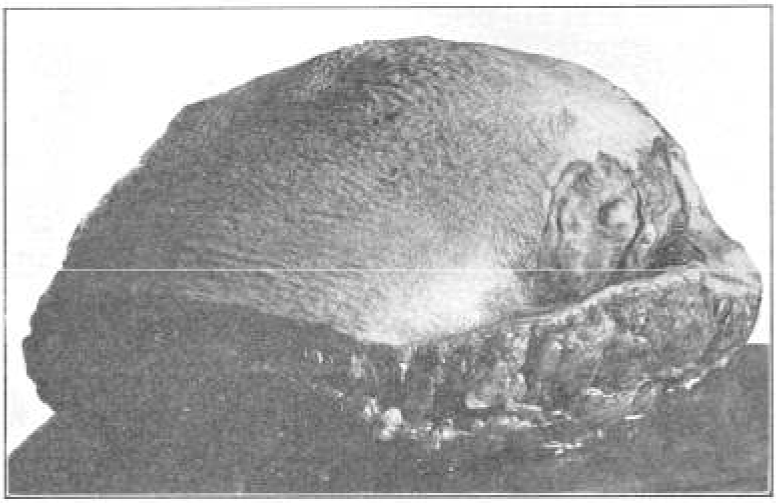
[1] I am indebted to Margaret S. Nickerson, of the University of Minnesota, for the camera-lucida drawings below.

CASE I. *Cancer of Submammary Fold.*—Mrs. A., aged forty-two years, French-Canadian, married, a patient of Dr. J. E. Moore, to whom I am indebted for the clinical history, was seen first in July, 1898, when she had a small, indurated ulcer in the submammary fold of right breast, which had been present for a long time—some years. Physical examination showed dulness of right chest and anterior mediastinum, and this was supposed to be due to malignant deposit, and operation was consequently refused.

She improved after this; the pulmonary dulness disappeared, and the ulcer made little headway.

FIG. 2.



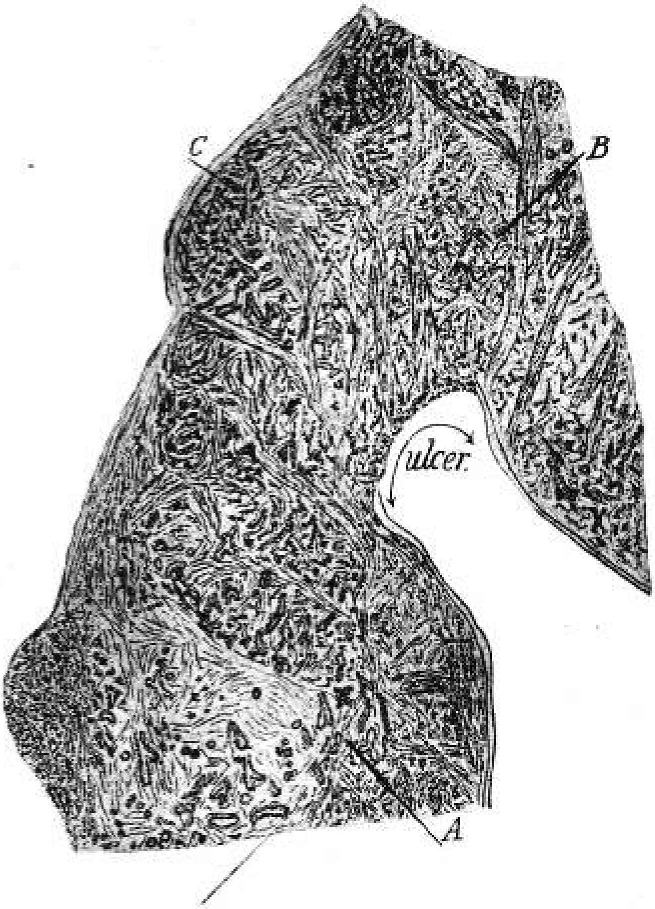
Photograph of Case I., showing removed breast with ulcer of submammary fold.

In 1900, two years after the first examination, the ulcer was little, if any, larger than at first, but her general condition was better, and she being very anxious for operation, the tumor and breast were removed. She died of pulmonary complications within six months. As there was no post-mortem the existence of metastases can be only surmised.

The breast shows no cancer; in the skin of the submammary fold is a tumor dipping down about one-half inch in depth and extending in the skin about one inch each way from the angle. There is also an infiltration of the pectoral muscles and connective tissue, extending not over one inch from the primary growth.

Sections from the angle of the ulcer show an adenocarcinoma having a good deal of stroma, forming irregular alveoli containing irregularly cuboidal cells. In all sections from the older part of the tumor there are alveoli containig a single row of cells, with distinct lumen; but as sections are cut further away from the centre the cells become more atypical in shape and arrangement, and finally in the muscle and connective tissue infiltrations all trace of adenoma is lost and a pure scirrhus picture is seen.

Fig. 3.



CASE I. A schematic low-power sketch, showing a general view of the cross-section of the new-growth. Only the bottom of the sulcus is seen to be ulcerated. The letters show the fields from which the other drawings were made with camera lucida. × 10.

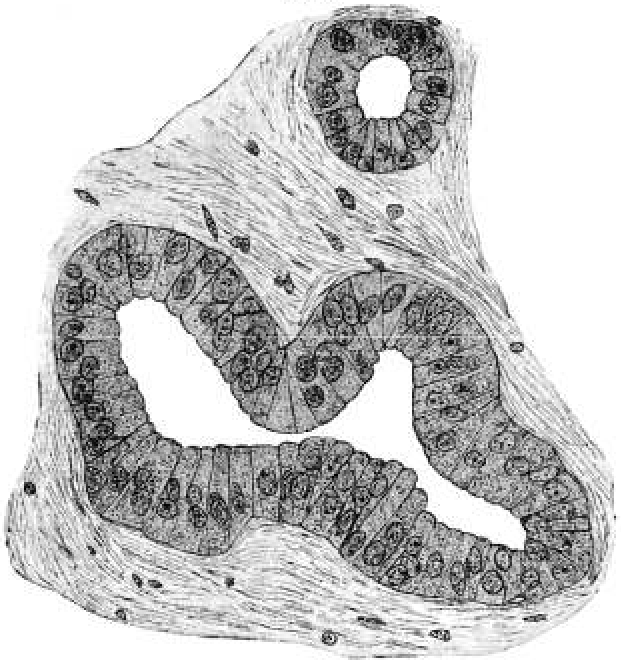
Shields describes a tumor clinically like this, except more acute, in a woman aged seventy-three years, which he says was scirrhus arising in peripheral lobule of the breast.

I am indebted to Dr. F. F. Wesbrook for the following history, the tumor coming to him for diagnosis from the practice of an irregular who was using an injection treatment.

CASE II.—The patient was an old-maid school-teacher, aged forty-two years, who had always been healthy. She had known of the tumor in her breast for over five years. After a prolonged injection treatment the tumor was removed with breast and axillary glands. There was recurrence within six months, local and general, and death a few months later.

The tumor consisted of a small nodule near the nipple, not encapsulated, and not infiltrating the muscle. Microscopically the tumor cannot be distinguished from the one from which the drawings were made. Like this, the superficial, older parts of tumor were adenocarcinoma, while the younger, advancing edge was in appearance scirrhus.

FIG. 4.



Gives a high-power detail drawing of a single acinus from field A. × 440.

This case, while in a comparatively young subject, showed the chronicity of history and prompt recurrence after irritation and operation which is so characteristic of the atrophic scirrhus.

CASE III.—An old-maid, aged fifty-eight years; general health good. The tumor had been present fourteen years and had ulcerated for several years, with frequent large hemorrhages. There was marked enlargement of the axillary lymph nodes. The breast was removed without opening the axilla and the patient made a good recovery, and was well and without recurrence two years later. The axillary lymph nodes became smaller soon after the operation.

An examination of the gross specimen shows a rather large breast with an ulcerated surface about three inches across in its upper and outer quadrant. The tumor is confined to an area about one-half an inch deep below the ulcer, but shows no encapsulation. The microscope shows a cylindrical-celled adenocarcinoma in areas near the sur-

FIG. 5.

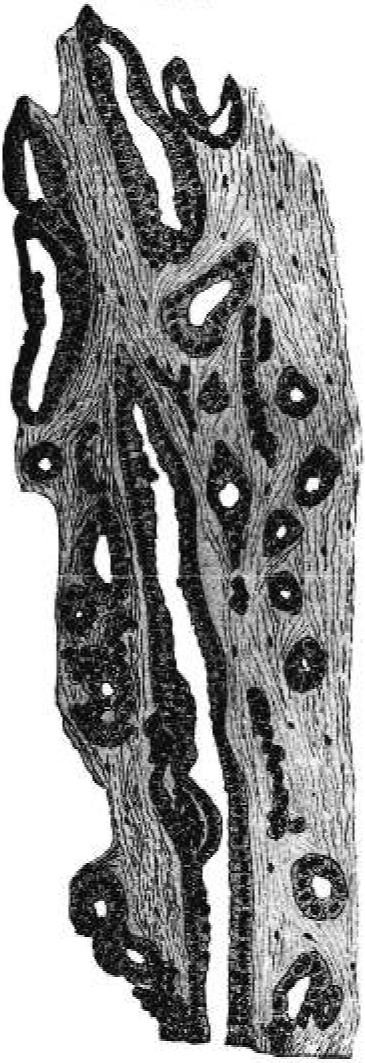


FIG. 6.

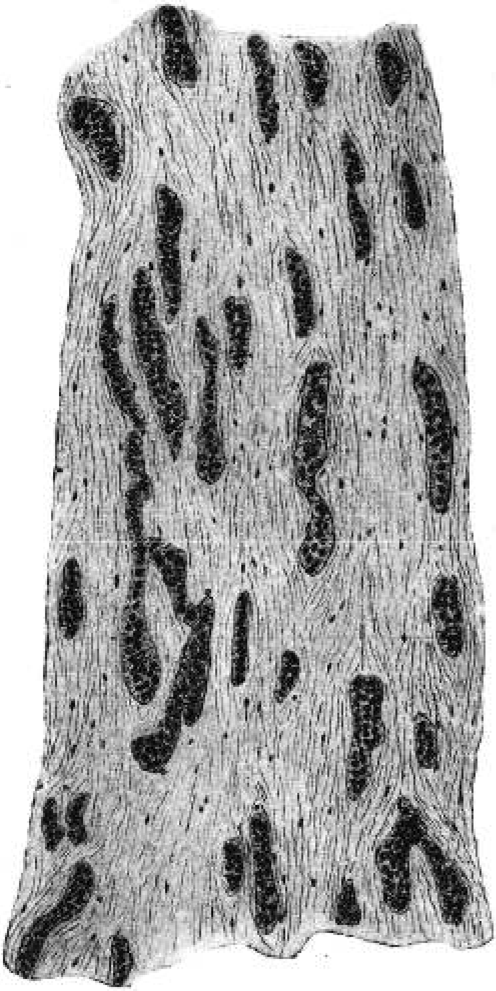


FIG. 5 shows field B of Fig. 3, and gives a general idea of the arrangement of the adenomatous tissue. × 140.

FIG. 6 shows a drawing from field C, and illustrates clearly the scirrhus picture presented by the advancing edge of the new-growth. × 140.

face of the ulcer, and more cuboidal-celled, scirrhus-like infiltration of its advancing edge.

The old classical view of this tumor being an ordinary scirrhus with fibrous overgrowth and fatty degeneration of the cells has probably a certain number of histological examinations to support it, as it has been accepted without question by so many authorities, but personally I have never happened to see a section substantiating this view.

On the other hand, adenocarcinoma of the breast is not mentioned by the writers above noted, with the exception of Halsted, and the *International Text-book*, which quotes his work, and the adenocarcinoma which Halsted figures is entirely different, histologically and clinically, from those noted above.

Is it not fair to presume that if these three tumors could come under observation at one laboratory, especially far from the great centres where such material is abundant, that more of these atrophic cancers, if all were studied by the microscope, might be found to have an adenomatous element which would justify their greater benignancy?

SUMMARY. 1. The term atrophic scirrhus is worthy of retention as describing an important clinical entity.

2. It is extremely doubtful whether such cases are benefited by operation.

3. Certain adenocarcinoma of the breast have the clinical history of the atrophic scirrhus.

4. It seems probable that if more of these tumors were studied histologically they might prove to have an adenomatous element to justify their comparative benignancy.

REPORT OF TWO CASES OF ULCERATIVE ANGINA AND STOMATITIS, ASSOCIATED WITH THE FUSIFORM BACILLUS AND SPIRILLUM OF VINCENT.

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The February number of The American Journal of the Medical Sciences for the preceding year contains a report by Dr. Emil Mayer of one case of membranous angina and stomatitis associated with the fusiform bacillus and spirillum of Vincent, with a brief review of several articles published abroad. In view of the number of cases reported in Germany and France, he comments upon the absence of any English literature upon the subject, leading us to infer that the affection must be rare in this country.